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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/557,796 | 04/25/2000 | James Hoch | 252/123 | 8950 |

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EXAMINER

LACOURCIERE, KAREN A

ART UNIT PAPER NUMBER

1635

DATE MAILED: 01/16/2003

20

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|------------------------------------|--|
| Office Action Summary | Application No. 09/557,796 | Applicant(s) HOCH ET AL. | |
| | Examiner Karen A. Lacourciere | Art Unit 1635 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 99-121 is/are pending in the application.
- 4a) Of the above claim(s) 110-121 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 99-109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15. 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I in Paper No. 19 is acknowledged.

Claims 110-121 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 19.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 99-109 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 99 is indefinite due to the recitation "isolated nucleic acid molecule" and "isolated genes". It is unclear how a nucleic acid or gene is comprised within a cell, but also isolated. Claims 100-109 are indefinite for the same reasons due to dependence on claim 99.

Claim 99 is indefinite due to the recitation "responsible". It is unclear what is encompassed in the term "responsible" in reference to a nucleic acid molecule or gene, for

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example, does "responsible" indicate that the nucleic acid or gene has enzymatic activity and actually performs the conversion of a source or target compound? Claims 100-109 are indefinite for the same reasons due to dependence on claim 99.

Claim 102 is indefinite due to the recitation "wherein said target is metabolized". It is unclear what is meant by this phrase, which seems to indicate a method step or outcome, and the parent claim is drawn to a bacterial cell, not a method. It is unclear if the bacterial cell metabolizes the compound to carbon, if the genes metabolize the target compound to carbon or if the target compound is capable of being metabolized to carbon, or if the phrase has another meaning.

Claim 105 recites the limitation "said bacterial cell". There is insufficient antecedent basis for this limitation in the claim, because it depends from claim 99, which does not recite a bacterial cell.

Claim 109 recites the limitation "the trp-lac hybrid promoter" in line two of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 99-104 and 106-109 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al. (US Patent No. 5,032,514).

Anderson et al. disclose recombinant bacterial cells comprising plasmids that comprise nucleic acids responsible for converting a source compound (for example, D-glucose) into a target compound (for example, 2-keto-D-gluconic acid) and further comprise genes responsible for converting the target compound into a detectable signal, including growth (for example, converting 2-keto-D-gluconic acid into 2,5-DKG, which is required for growth on minimal media plates). Anderson et al. further disclose recombinant cells wherein the target compound is 2-keto-gulonate. These target compounds are capable of being metabolized to carbon. Anderson et al. disclose their bacteria wherein the genes are under control of an inducible promoter, including the trp-lac hybrid promoter TacII. Therefore, Anderson et al. anticipates claims 99-104 and 106-109.

Claims 99, 102, 104 and 105 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood et al. (Applied and Environmental Microbiology, July 1992, Vol. 58, No. 7, p 2103-2110).

Wood et al. disclose recombinant *Klebsiella oxytoca* cells, wherein the cells comprise nucleic acids from *Zymomonas mobilis* that are responsible for converting a source compound (for example, amorphous cellulose) to a target compound which can be metabolized to carbon (for example, cellobiose) and further comprising genes from *Zymomonas mobilis* that are responsible for converting the target compound to a detectable signal (for example, ethanol, which can be detected by gas chromatography).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen A. Lacourciere whose telephone number is (703) 308-7523. The examiner can normally be reached on Monday-Friday 8:30-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader can be reached on (703) 308-0447. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 305-1935 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Karen A. Lacourciere
January 8, 2003


KAREN LACOURCIERE
PATENT EXAMINER